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NEWS	3	Feb 06	Engineering Information Encompass files have new names
NEWS	4	Feb 16	TOXLINE no longer being updated
NEWS	5	Apr 23	Search Derwent WPINDEX by chemical structure
NEWS	6	Apr 23	PRE-1967 REFERENCES NOW SEARCHABLE IN CAPLUS AND CA
NEWS	7	May 07	DGENE Reload

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L1          243 RIPAMONTI-U?/AU

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=> s l1 and l2

L3           13 L1 AND L2

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L4             5 DUP REM L3 (8 DUPLICATES REMOVED)

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L4   ANSWER 1 OF 5  EMBASE  COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER:   2001142621  EMBASE
TITLE:              Bone induction by BMPs/OPs and related family members in
                    primates: The critical role of delivery systems.
AUTHOR:             Ripamonti U.; Ramoshebi L.N.; Matsaba
                    T.; Tasker J.; Crooks J.; Teare J.
CORPORATE SOURCE:   Dr. U. Ripamonti, Bone Research Unit, MRC/University of
the
                    Witwatersrand, 7 York Road, Parktown 2193, Johannesburg,
                    South Africa. 177ripa@chiron.wits.ac.za
SOURCE:             Journal of Bone and Joint Surgery - Series A, (2001)
                    83/SUPPL. 1 II (S1116-S1127).
                    Refs: 60
                    ISSN: 0021-9355  CODEN: JBJSA3
COUNTRY:            United States
DOCUMENT TYPE:      Journal; Article
FILE SEGMENT:       021     Developmental Biology and Teratology
                    033     Orthopedic Surgery
                    037     Drug Literature Index
LANGUAGE:           English
SUMMARY LANGUAGE:   English
AB   Background: In a series of studies in the primate Papio ursinus, we have
     examined the capacity of bone morphogenetic proteins (BMPs/OPs) delivered
     in a variety of biomaterial carrier systems to elicit bone formation in
     heterotopic and orthotopic sites. In this review, we compare the
     osteoinductive effects of different biomaterial delivery systems that
have
     or have not been pretreated with BMPs/OPs. In particular, we focus on the
     geometric induction of bone formation by sintered porous hydroxyapatite
     (SPHA) discs with concavities on their planar surfaces, which elicit bone
     formation without exogenously applied BMPs/OPs. Methods: Heterotopic bone
     formation was examined by bilaterally implanting 100-mg pellets of a
     collagenous carrier containing BMPs/OPs in the rectus abdominis muscle of
     the adult baboon. Orthotopic bone formation was examined by implanting 1
g
     of a collagenous carrier containing BMPs/OPs into two full-thickness
     critical-sized 25-mm-diameter defects on each side of the calvaria of
     adult baboons. The BMPs/OPs whose effects were examined included
     recombinant human osteogenic protein-1 (rhOP-1), recombinant human
     transforming growth factor-.beta.1 (rhTGF-.beta.1), rhTGF-.beta.2, and
     porcine platelet derived transforming growth factor-.beta.1
     (pTGF-.beta.1). Tissue from the rectus abdominis muscle was harvested 30
     or 90 days after implantation. Tissue from the orthotopic calvarial model
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was examined at 1, 3, 6, 9, and 12 months after implantation. To demonstrate the effect of surface geometry on bone induction, hydroxyapatite powders were sintered to form solid discs with a series of concavities on the planar surfaces of the SPHA discs. The discs were either pretreated with exogenous rhOP-1 or not treated with exogenous OP-1. They were then implanted heterotopically or orthotopically into calvarial defects. Bone formation was evaluated histologically in undecalcified sections stained with Goldner's trichrome stain or 0.1% toluidine blue. Results: Naturally derived BMPs/OPs or rhOP-1 in a collagenous carrier elicit heterotopic bone formation and the complete healing of 25-mm-diameter critical-sized defects by day 90 following implantation. Binary applications of TGF-.beta.1 together with rhOP-1 in the collagen carrier induced massive endochondral ossicles in heterotopic sites and bone formation in calvarial defects, pTGF-.beta.1, rhTGF-.beta.1, and rhTGF-.beta.2 are powerful inducers of heterotopic endochondral bone formation but elicit limited bone formation in calvarial defects. SPHA discs pretreated with rhOP-1 elicited extensive bone formation in both heterotopic and orthotopic sites. However, SPHA without rhOP-1 also elicited bone formation in heterotopic and orthotopic sites and complete healing of the calvarial defects. Conclusion: We have prepared SPHA discs with concavities on their planar surfaces that induce bone formation in heterotopic or orthotopic critical-sized calvarial defects without exogenously applied BMPs/OPs. This biomaterial induces bone formation by intrinsic osteoinductivity regulated by the geometry of the substratum. The incorporation of specific biological activities into biomaterials by manipulating the geometry of the substratum, defined as geometric induction of bone formation, may make it possible to engineer morphogenetic responses for therapeutic osteogenesis in clinical contexts.

Clinical Relevance: We have implemented a clinical trial using naturally derived BMPs/OPs extracted and purified from bovine bone matrices and implanted in craniofacial defects in humans. In addition, the discovery that specific geometric and surface characteristics of sintered hydroxyapatites can induce intrinsic osteoinductivity in primates paves the way for formulation and therapeutic application of porous substrata designed to obtain predictable intrinsic osteoinductivity in clinical contexts.

L4 ANSWER 2 OF 5 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2001221630 MEDLINE
DOCUMENT NUMBER: 21209732 PubMed ID: 11314789
TITLE: Bone induction by BMPs/OPs and related family members in primates.
AUTHOR: **Ripamonti U; Ramoshebi L N**; Matsaba T; Tasker J; Crooks J; Teare J
CORPORATE SOURCE: Bone Research Unit, South African Medical Research Council/University of the Witwatersrand, Medical School, Johannesburg.. 177ripa@chiron.wits.ac.za
SOURCE: JOURNAL OF BONE AND JOINT SURGERY. AMERICAN VOLUME, (2001) 83-A Suppl 1 (Pt 2) S116-27.
Journal code: HJR; 0014030. ISSN: 0021-9355.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 20010517
Last Updated on STN: 20010517
Entered PubMed: 20010420
Entered Medline: 20010503

AB BACKGROUND: In a series of studies in the primate Papio ursinus, we have examined the capacity of bone morphogenetic proteins (BMPs/OPs) delivered in a variety of biomaterial carrier systems to elicit bone formation in heterotopic and orthotopic sites. In this review, we compare the osteoinductive effects of different biomaterial delivery systems that have or have not been pretreated with BMPs/OPs. In particular, we focus on the geometric induction of bone formation by sintered porous hydroxyapatite (SPHA) discs with concavities on their planar surfaces, which elicit bone formation without exogenously applied BMPs/OPs. METHODS: Heterotopic bone formation was examined by bilaterally implanting 100-mg pellets of a collagenous carrier containing BMPs/OPs in the rectus abdominis muscle of the adult baboon. Orthotopic bone formation was examined by implanting 1 g of a collagenous carrier containing BMPs/OPs into two full-thickness critical-sized 25-mm-diameter defects on each side of the calvaria of adult baboons. The BMPs/OPs whose effects were examined included recombinant human osteogenic protein-1 (rhOP-1), recombinant human transforming growth factor-beta1 (rhTGF-beta1), rhTGF-beta2, and porcine platelet derived transforming growth factor-beta1 (pTGF-beta1). Tissue from the rectus abdominis muscle was harvested 30 or 90 days after implantation. Tissue from the orthotopic calvarial model was examined at 1, 3, 6, 9, and 12 months after implantation. To demonstrate the effect of surface geometry on bone induction, hydroxyapatite powders were sintered to form solid discs with a series of concavities on the planar surfaces of the SPHA discs. The discs were either pretreated with exogenous rhOP-1 or not treated with exogenous OP-1. They were then implanted heterotopically or orthotopically into calvarial defects. Bone formation was evaluated histologically in undecalcified sections stained with Goldner's trichrome stain or 0.1% toluidine blue. RESULTS: Naturally derived BMPs/OPs or rhOP-1 in a collagenous carrier elicit heterotopic bone formation and the complete healing of 25-mm-diameter critical-sized defects by day 90 following implantation. Binary applications of TGF-beta1 together with rhOP-1 in the collagen carrier induced massive endochondral ossicles in heterotopic sites and bone formation in calvarial defects. pTGF-beta1, rhTGF-beta1, and rhTGF-beta2 are powerful inducers of heterotopic endochondral bone formation but elicit limited bone formation in calvarial defects. SPHA discs pretreated with rhOP-1 elicited extensive bone formation in both heterotopic and orthotopic sites. However, SPHA without rhOP-1 also elicited bone formation in heterotopic and orthotopic sites and complete healing of the calvarial defects. CONCLUSION: We have prepared SPHA discs with concavities on their planar surfaces that induce bone formation in heterotopic or orthotopic critical-sized calvarial defects without exogenously applied BMPs/OPs. This biomaterial induces bone formation by intrinsic osteoinductivity regulated by the geometry of the substratum. The incorporation of specific biological activities into biomaterials by manipulating the geometry of the substratum, defined as geometric induction of bone formation, may make it possible to engineer morphogenetic responses for therapeutic osteogenesis in clinical contexts.

CLINICAL RELEVANCE: We have implemented a clinical trial using naturally derived BMPs/OPs extracted and purified from bovine bone matrices and implanted in craniofacial defects in humans. In addition, the discovery that specific geometric and surface characteristics of sintered hydroxyapatites can induce intrinsic osteoinductivity in primates paves the way for formulation and therapeutic application of porous substrata designed to obtain predictable intrinsic osteoinductivity in clinical contexts.

L4 ANSWER 3 OF 5 CANCERLIT
ACCESSION NUMBER: 2001209732 CANCERLIT
DOCUMENT NUMBER: 21209732
TITLE: Bone induction by BMPs/OPs and related family members in primates.
AUTHOR: **Ripamonti U; Ramoshebi L N;** Matsaba T; Tasker J; Crooks J; Teare J
CORPORATE SOURCE: Bone Research Unit, South African Medical Research Council/University of the Witwatersrand, Medical School, Johannesburg. 177ripa@chiron.wits.ac.za
SOURCE: JOURNAL OF BONE AND JOINT SURGERY. AMERICAN VOLUME, (2001).
83-A Suppl., Vol. 1, Pt. 2, pp. S116-27.
Journal code: HJR. ISSN: 0021-9355.
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
FILE SEGMENT: MEDL; L; Abridged Index Medicus Journals; I
LANGUAGE: English
OTHER SOURCE: MEDLINE 21209732
ENTRY MONTH: 200104

AB BACKGROUND: In a series of studies in the primate Papio ursinus, we have examined the capacity of bone morphogenetic proteins (BMPs/OPs) delivered in a variety of biomaterial carrier systems to elicit bone formation in heterotopic and orthotopic sites. In this review, we compare the osteoinductive effects of different biomaterial delivery systems that have or have not been pretreated with BMPs/OPs. In particular, we focus on the geometric induction of bone formation by sintered porous hydroxyapatite (SPHA) discs with concavities on their planar surfaces, which elicit bone formation without exogenously applied BMPs/OPs. METHODS: Heterotopic bone formation was examined by bilaterally implanting 100-mg pellets of a collagenous carrier containing BMPs/OPs in the rectus abdominis muscle of the adult baboon. Orthotopic bone formation was examined by implanting 1 g of a collagenous carrier containing BMPs/OPs into two full-thickness critical-sized 25-mm-diameter defects on each side of the calvaria of adult baboons. The BMPs/OPs whose effects were examined included recombinant human osteogenic protein-1 (rhOP-1), recombinant human transforming growth factor-beta1 (rhTGF-beta1), rhTGF-beta2, and porcine platelet derived transforming growth factor-beta1 (pTGF-beta1). Tissue from the rectus abdominis muscle was harvested 30 or 90 days after implantation. Tissue from the orthotopic calvarial model was examined at 1, 3, 6, 9, and 12 months after implantation. To demonstrate the effect of surface geometry on bone induction, hydroxyapatite powders were sintered to form solid discs with a series of concavities on the planar surfaces of the SPHA discs. The discs were either pretreated with exogenous rhOP-1 or not treated with exogenous OP-1. They were then implanted heterotopically or orthotopically into calvarial defects. Bone formation was evaluated histologically in undecalcified sections stained with Goldner's trichrome stain or 0.1% toluidine blue. RESULTS: Naturally derived BMPs/OPs or rhOP-1 in a collagenous carrier elicit heterotopic bone formation and the complete healing of 25-mm-diameter critical-sized defects by day 90 following implantation. Binary applications of TGF-beta1 together with rhOP-1 in the collagen carrier induced massive endochondral ossicles in heterotopic sites and bone formation in calvarial defects. pTGF-beta1, rhTGF-beta1, and rhTGF-beta2 are powerful inducers of heterotopic endochondral bone formation but elicit limited bone formation in calvarial defects. SPHA discs pretreated with rhOP-1 elicited extensive bone

formation in both heterotopic and orthotopic sites. However, SPHA without rhOP-1 also elicited bone formation in heterotopic and orthotopic sites and complete healing of the calvarial defects. CONCLUSION: We have prepared SPHA discs with concavities on their planar surfaces that induce bone formation in heterotopic or orthotopic critical-sized calvarial defects without exogenously applied BMPs/OPs. This biomaterial induces bone formation by intrinsic osteoinductivity regulated by the geometry of the substratum. The incorporation of specific biological activities into biomaterials by manipulating the geometry of the substratum, defined as geometric induction of bone formation, may make it possible to engineer morphogenetic responses for therapeutic osteogenesis in clinical contexts.

CLINICAL RELEVANCE: We have implemented a clinical trial using naturally derived BMPs/OPs extracted and purified from bovine bone matrices and implanted in craniofacial defects in humans. In addition, the discovery that specific geometric and surface characteristics of sintered hydroxyapatites can induce intrinsic osteoinductivity in primates paves the way for formulation and therapeutic application of porous substrata designed to obtain predictable intrinsic osteoinductivity in clinical contexts.

L4 ANSWER 4 OF 5 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2000225398 MEDLINE
DOCUMENT NUMBER: 20225398 PubMed ID: 10760748
TITLE: Osteogenic protein-1, a bone morphogenetic protein, induces angiogenesis in the chick chorioallantoic membrane and synergizes with basic fibroblast growth factor and transforming growth factor-beta1.
AUTHOR: **Ramoshebi L N; Ripamonti U**
CORPORATE SOURCE: Bone Research Laboratory, Medical Research Council/University of the Witwatersrand, Medical School, Johannesburg 2193, South Africa.. natr@chiron.wits.ac.za
SOURCE: ANATOMICAL RECORD, (2000 May 1) 259 (1) 97-107.
Journal code: 4QM; 0370540. ISSN: 0003-276X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200006
ENTRY DATE: Entered STN: 20000706
Last Updated on STN: 20000706
Entered Medline: 20000623

AB Capillary invasion is a vital regulatory signal during bone morphogenesis that is influenced by angiogenic molecules such as fibroblast growth factor (FGF) and some members of the transforming growth factor-beta (TGF-beta) superfamily, including TGF-betas themselves. Bone morphogenetic proteins (BMPs), which are members of the TGF-beta superfamily, have previously not been shown to possess direct angiogenic properties. Osteogenic protein-1 (OP-1; BMP-7) is a potent regulator of cartilage and bone differentiation in vivo. The osteogenic and angiogenic properties of OP-1 at both ortho- and heterotopic sites in adult chacma baboons (Papio ursinus) are enhanced synergistically by the simultaneous application of relatively low doses of TGF-beta1. The single application of relatively high doses of TGF-beta1 (20 ng), and bFGF (500 ng) or relatively low (100 ng) and high (1,000 ng) doses of OP-1 in the chick chorioallantoic membrane (CAM) assay elicited a prominent and (for OP-1) dose-dependent angiogenic response. The binary application of a relatively low dose of OP-1 (100 ng) with a relatively low dose of bFGF (100 ng) or with a relatively low (5 ng) or high (20 ng) dose of TGF-beta1 resulted in a

synergistic enhancement of the angiogenic response. The angiogenic effect of the relatively low doses of the combined morphogens was distinctly more pronounced than that of the single application of the relatively high doses of the respective factors. The present findings suggest that these morphogens may be deployed in binary combination in order to accentuate experimental angiogenesis. The cooperative interaction of the different morphogens in the CAM assay may provide important biological clues towards the control of clinical angiogenesis.

L4 ANSWER 5 OF 5 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 1999443225 MEDLINE
DOCUMENT NUMBER: 99443225 PubMed ID: 10515202
TITLE: Immunolocalization of Bone Morphogenetic Protein-2 and -3 and Osteogenic Protein-1 during murine tooth root morphogenesis and in other craniofacial structures.
AUTHOR: Thomadakis G; **Ramoshebi L N**; Crooks J; Rueger D C; **Ripamonti U**
CORPORATE SOURCE: Bone Research Laboratory, Medical Research Council/University of the Witwatersrand, Medical School, Johannesburg, South Africa.
SOURCE: EUROPEAN JOURNAL OF ORAL SCIENCES, (1999 Oct) 107 (5) 368-77.
Journal code: CBQ; 9504563. ISSN: 0909-8836.
PUB. COUNTRY: Denmark
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Dental Journals; Priority Journals
ENTRY MONTH: 199912
ENTRY DATE: Entered STN: 20000113
Last Updated on STN: 20000113
Entered Medline: 19991220
AB The distribution of Bone Morphogenetic Protein-2, and -3 (BMP-2 and BMP-3) and Osteogenic Protein-1 (OP-1, also known as BMP-7) during root morphogenesis and in other craniofacial structures was examined in sections of 12- to 18-d-old mouse heads using polyclonal and monoclonal antibodies. BMP-3 and OP-1 were localized in alveolar bone, cementum, and periodontal ligament, whereas BMP-2 was only localized in the alveolar bone of periodontium. All three BMPs were localized in predentine, dentine, odontoblasts, osteoblasts, osteocytes, osteoid, cartilage, chondrocytes and spiral limbus. BMP-2 and OP-1 were also localized in spiral ligament and interdentate cells of the cochlea, whilst BMP-3 was restricted to the spiral ganglion. BMP-3 was also localized in ducts of submandibular and sublingual salivary glands, acini of the lacrimal gland, Purkinje cells in the cerebellum, nerve fibres of the cerebellum and brain, afferent cells of the dorsal root ganglia, inferior alveolar nerve, and peripheral processes of the vestibulocochlear nerve. OP-1 was also localized in hair and whisker follicles, sclera of the eye and in ameloblasts. The demonstration of BMP-3 in the nervous system suggests that this protein may be neurotrophic during development and maintenance of the nervous system. The composite expression of BMPs/OPs during periodontal tissue morphogenesis suggests that optimal therapeutic regeneration may entail the combined use of different BMPs/OPs.

DB Name	Query	Hit Count	Set Name
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l16 NOT anti-angiogen$	28	L17
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l13 and (angiogen$.clm.)	35	L16
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l13 and (angiogen.clm.)	0	L15
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l11 and l13	1	L14
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	(bone adj morphogen$) or BMP	2184	L13
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l8 and l11	0	L12
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	angiogen$.ti.	1223	L11
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l9 and (angiogen$.ti. or angiogen$.clm.)	8	L10
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l8 and l4	56	L9
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	(osteogenic adj protein) OR OP-1	474	L8
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l6 and l4	157	L7
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	OP-1 or BMP$	2022	L6
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	l1 and l4	0	L5
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	angiogen$	6023	L4
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	Ramoshebi.in.	0	L3
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	Ramoshebi-L$.in.	0	L2
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	Ripamonti-u$.in.	13	L1

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Terms	Documents
l16 NOT anti-angiogen$	28

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Refine Search: `l16 NOT anti-angiogen$` Clear

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